

Chemical Compounds in Cells

CARBOHYDRATES

ex. sugars, starches

made of Carbon, Hydrogen, Oxygen

- used for energy (immediate energy with sugars, stored energy with starches)
- provides fiber (cellulose)
- part of cell membrane

LIPIDS

ex. fats, oils, waxes

made of C, H, O

- energy rich compound
- delays hunger (has more calories than protein or carbs)
- component of cell membrane
- plays role in metabolism
- helps with insulation

PROTEINS

ex. protein rich foods include meat, fish, nuts, eggs

made of C, H, O, N, S

- made of 20 possible amino acids (building blocks of proteins)
- enzymes, antibodies, and hormones are proteins
- maintains and repairs body tissue
- structural component of cell membrane and organelles
- also builds muscle, organs, teeth, skin, hair, and nails

NUCLEIC ACIDS

ex. Deoxyribonucleic Acid and Ribonucleic Acid

made of C, H, O, N, P

- instructions to carry out all functions of life!
- directions for making proteins
- controls cell reproduction

WATER

made of H, O

- chemical reactions occur with water
- makes cytoplasm
- helps keep shape and size of cell
- carries substances into/out of cells
- important in maintaining stable temperature (homeostasis)